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Editorial

The StringMasters workshop was first held in July 2007 at McMaster University, Hamilton, Ontario, Canada. The idea was to bring together researchers in combinatorics on words, focused on string algorithms, to work in small groups, in a relaxed and friendly atmosphere, on projects that they might collectively find interesting. Indeed, given the fundamental nature of strings in computer science and informatics, interesting and practical problems are plentiful. The concept was that, instead of coming to a meeting with a paper already prepared, researchers would turn up only with ideas and questions, hoping to go away with the beginnings of a paper and a new group of collaborators. The informal structure of the workshop was seen to be particularly welcoming and beneficial for early stage researchers. In 2007 the meeting was conceived of as a one-shot experience — there was no thought of repeating it, but, unexpectedly StringMasters caught on!

In 2008 it was held again at McMaster, then twice in 2009: first at Stellenbosch University, South Africa, at the end of July, the following week on the other side of the Indian Ocean at Curtin University, Perth, Western Australia. In 2010 StringMasters was held at King's College London following the 21st International Workshop on Combinatorial Algorithms. The research output of StringMasters 2007 & 2008 appeared as a Special Issue on Stringology of Fundamenta Informaticae (2009), edited by Ryszard Janicki, Simon J. Puglisi and M. Sohel Rahman. It is the papers emerging from the 2009 and 2010 meetings that are collected in this Special Issue.

The five papers published here suggest the wide range of topics within stringology, arising from both theory and applications. The first one by Travis Gagie presents a startling result: a new lower bound for data compression based on a card trick. The second contribution by Moosa and Rahman deals with an old topic in a new way: pattern matching, but allowing permutations of the pattern to occur in the text. The third paper by Baker, Deza and Franek provides new insight into a conjecture that has been much studied by many authors for the last dozen years: is the number of maximal periodicities in a string of length n at most n? The fourth article by Iliopoulos, Kourie, Mouchard, Musombuka, Pissis and Ridder introduces a variation of the well-known and challenging task of re-sequencing at the forefront of bioinformatics: mapping a set of short sequences to a dynamically changing genomic sequence. We conclude with algorithms on indeterminate (degenerate) strings, where Nazeen, Rahman and Reaz for the first time describe the reverse engineering of a border array to an indeterminate string.

The editors express their gratitude to the anonymous referees for their careful work, over two rounds of reviewing, that has substantially improved the quality of this special issue. We also thank the authors for the preparation of their valued contributions, and the editors of the Journal of Discrete Algorithms for publishing these works as a special issue. StringMasters events have gone from strength to strength due to the interest, commitment and collaboration of the growing international pool of participants: many thanks to them for they are StringMasters!

For information about past, present and future StringMasters meetings, see http://www.stringmasters.org/.

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